IN THE CLAIMS

Please amend the claims as follows:

1. (Original) An implantable medical device, comprising:

a sensing circuit to sense at least one electrogram;

a pacing circuit to deliver pacing pulses; and

a processor coupled to the sensing circuit and the pacing circuit, the processor including a cardiac monitor controller that is upgradeable to a pacemaker controller by programming the implantable medical device,

wherein the sensing circuit is adapted to be programmed from a circuit suitable for far-field electrogram sensing to a circuit suitable for intracardiac electrogram sensing when the cardiac monitor controller is upgraded to the pacemaker controller.

2. (Original) The implantable medical device of claim 1, wherein the sensing circuit comprises a band-pass digital filter having programmable filter coefficients.

3. (Original) The implantable medical device of claim 1, wherein the sensing circuit comprises a first band-pass filter and a second band-pass filter selectable by programming.

4. (Original) The implantable medical device of claim 3, wherein the first band-pass filter has a first low cutoff frequency in a range of 0.5 Hz to 10 Hz and a first high cutoff frequency in a range of 30 Hz to 100 Hz.

5. (Original) The implantable medical device of claim 3, wherein the second band-pass filter has a second low cutoff frequency in a range of 10 Hz to 30 Hz and a second high cutoff frequency in a range of 60 Hz to 150 Hz.

6. (Original) The implantable medical device of claim 1, wherein the processor comprises:

a microprocessor; and

a memory circuit coupled to the microprocessor, the memory circuit includes a random access memory containing at least a portion of a control code, including one of a cardiac monitor control code and a pacemaker control code.

7. (Original) The implantable medical device of claim 6, wherein the sensing circuit further comprises an activity sensor circuit to sense at least one physical activity level.

8. (Original) The implantable medical device of claim 7, wherein the memory circuit comprises a data storage space allowing storage of one or more of the at least one electrogram, the at least one physical activity level, and an activity log reporting detections of predetermined activities.

9. (Original) The implantable medical device of claim 8, wherein the processor further comprises an activity detector to detect the predetermined activities from one or more of the at least one electrogram and the at least one physical activity signal.

10. (Original) The implantable medical device of claim 9, wherein the activity detector comprises an arrhythmia detector to detect at least one predetermined type of arrhythmia from the at least one electrogram.

11. (Currently Amended) An implantable adaptor adapted for connecting to an implantable cardiac rhythm management (CRM) device <u>for use in a body having a heart</u>, the adaptor comprising:

a first implantable electrode adapted for far-field electrogram sensing <u>and configured to be implanted in the body away from the heart;</u>

an implantable connector electrically coupled to the first implantable electrode, the implantable connector adapted to provide a detachable connection between the implantable electrode and the implantable CRM device; and

an adaptor body coupled between the first implantable electrode and the implantable connector, the adaptor body configured to allow the first implantable electrode to be implanted in the body away from the heart.

12. (Original) The implantable adaptor of claim 11, wherein the adaptor body has a length that is about the minimum length required for the first implantable electrode to expose to tissue for proper far-field electrogram sensing when the adaptor is connected to the implantable CRM device.

13. (Original) The implantable adaptor of claim 11, wherein the adaptor body includes an elongate lead.

14. (Currently Amended) The implantable adaptor of claim 11, further comprising a second implantable electrode adapted for far-field electrogram sensing and configured to be implanted in the body away from the heart, the second implantable electrode electrically coupled to the implantable connector, wherein the implantable connector is adapted to further provide a second electrical connection between the second implantable electrode and the implantable CRM device, and the adaptor body is configured to allow the second implantable electrode to be implanted in the body away from the heart.

15. (Original) The implantable adaptor of claim 14, wherein the adaptor body includes an elongate lead, and the second implantable electrode is incorporated into the adaptor body, between the first implantable electrode and the implantable connector.

16. (Currently Amended) An implantable medical device programmer, comprising:

a device configuration module adapted to generate instructions for configuring an implantable medical device into one of an implantable cardiac monitor and an implantable pacemaker;

a telemetry module coupled to the device configuration module, the telemetry module including a telemetry transmitter to transmit the instructions to the implantable medical device

and a telemetry receiver to receive physiological data acquired by and transmitted from the implantable medical device; and

a data analyzer including at least one detector to detect a predetermined condition from the physiological ~~signal~~ data, the predetermined condition indicative of a need for a pacing therapy,

wherein the device configuration module generates instructions for configuring the implantable medical device into the implantable pacemaker in response to a detection of the predetermined condition.

17. (Original) The programmer of claim 16, wherein the at least one detector comprises a cardiac arrhythmia detector.

18. (Original) The programmer of claim 16, wherein the device configuration module comprises a pacemaker configuration module including instructions for converting the implantable cardiac monitor into the implantable pacemaker.

19. (Original) The programmer of claim 18, wherein the device configuration module further comprises a cardiac monitor configuration module including instructions for converting the implantable pacemaker into the implantable cardiac monitor.

20. (Original) The programmer of claim 16, wherein the telemetry module comprises an inductive telemetry module providing for near field communication with the implantable medical device.

21. (Original) The programmer of claim 16, wherein the telemetry module comprises a far-field radio frequency telemetry module providing for far field communication with the implantable medical device.

22. (Original) A system, comprising:

an implantable cardiac rhythm management (CRM) device including:

a device body encapsulating a CRM circuit upgradeable from a monitoring circuit to a pacing circuit after the implantation of the implantable CRM device; and

a header attached to the device body, the header including at least one connector providing for electrical connection to the CRM circuit; and

an implantable adaptor adapted to be connected to the header, the implantable adaptor including a first electrode adapted to sense a far-field electrogram.

23. (Original) The system of claim 22, wherein the implantable adaptor comprises a second electrode.

24. (Original) The system of claim 22, wherein the header comprises a second electrode.

25. (Original) The system of claim 22, wherein the implantable CRM device comprises a pacemaker.

26. (Original) The system of claim 25, wherein the implantable CRM device comprises a cardiac resynchronization device.

27. (Original) The system of claim 22, further comprising an external programmer communicatively coupled to the implantable CRM device.

28. (Currently Amended) The system of claim 27, wherein the external programmer comprises [[an]] a device configuration module adapted to generate instructions for upgrading the CRM circuit from the monitoring circuit to the pacing circuit.

29. (Original) A computer-readable medium having computer-executable instructions to cause a computer or computer-based system to perform a method comprising:

generating instructions readable by an implantable cardiac monitor, the instructions upgrading the implantable cardiac monitor to an implantable pacemaker, including programming a sensing circuit for sensing an intracardiac electrogram; and

transmitting the instructions to the implantable cardiac monitor via telemetry.

30. (Original) The computer-readable medium of claim 29, wherein programming the sensing circuit comprises programming a band-pass filter.

31. (Original) The computer-readable medium of claim 29, wherein generating the instructions comprises generating instructions for re-allocating memory spaces for program and data storages.

32. (Original) The computer-readable medium of claim 29, wherein generating the instructions comprises generating one or more pacing algorithms.

33. (Original) The computer-readable medium of claim 29, wherein generating the instructions comprises generating a command to execute one or more pacing algorithms stored in the implantable cardiac monitor.

34. (Original) The computer-readable medium of claim 29, wherein the method further comprises receiving a signal indicative of whether the implantable cardiac monitor has been upgraded to the implantable pacemaker.

35. (Original) The computer-readable medium of claim 29, wherein transmitting the instructions to the implantable cardiac monitor includes transmitting the instructions when a need to upgrade the implantable cardiac monitor to the implantable pacemaker is indicated, and wherein the method further comprises:

receiving data acquired by the implantable cardiac monitor; and

analyzing the received data for an indication of the need to upgrade the implantable cardiac monitor to the implantable pacemaker.

36. (Original) The computer-readable medium of claim 35, wherein analyzing the received data comprises analyzing the received data to detect one or more predetermined cardiac arrhythmias.

37. (Original) A computer-readable medium having computer-executable instructions to cause a computer or computer-based system to perform a method comprising:

generating instructions readable by an implantable pacemaker, the instructions converting the implantable pacemaker to an implantable cardiac monitor, including programming a sensing circuit for sensing a far-field electrogram; and

transmitting the instructions to the implantable pacemaker.

38. (Original) The computer-readable medium of claim 37, wherein programming the sensing circuit comprises programming a band-pass filter.

39. (Original) The computer-readable medium of claim 37, wherein generating the instructions comprises generating instructions for re-allocating additional memory spaces for data storage.

40. (Original) The computer-readable medium of claim 37, wherein generating the instructions comprises generating instructions for preparing and executing at least one arrhythmia detection algorithms.

41. (Original) The computer-readable medium of claim 40, wherein generating the instructions comprises generating instructions for creating an activity log reporting detection of arrhythmias each including a time of occurrence and a type.

42. (Original) The computer-readable medium of claim 37, wherein the method further comprises receiving a signal indicative of whether the implantable pacemaker has been converted to the implantable cardiac monitor.

43. (Original) A method, comprising:

generating instructions readable by an implantable cardiac monitor, the instructions upgrading the implantable cardiac monitor to an implantable pacemaker, including programming a sensing circuit for sensing an intracardiac electrogram; and

transmitting the instructions to the implantable cardiac monitor via telemetry.

44. (Original) The method of claim 43, wherein programming the sensing circuit comprises programming a band-pass filter.

45. (Original) The method of claim 43, wherein generating the instructions comprises generating instructions for re-allocating memory spaces for program and data storages.

46. (Original) The method of claim 43, wherein generating the instructions comprises generating one or more pacing algorithms.

47. (Original) The method of claim 43, wherein generating the instructions comprises generating a command to execute one or more pacing algorithms stored in the implantable cardiac monitor.

48. (Original) The method of claim 43, further comprising receiving a signal indicative of whether the implantable cardiac monitor has been upgraded to the implantable pacemaker.

49. (Original) The method of claim 43, wherein transmitting the instructions to the implantable cardiac monitor comprises transmitting the instructions when a need to upgrade the implantable cardiac monitor to the implantable pacemaker is indicated, and further comprising:

receiving data acquired by the implantable cardiac monitor; and

analyzing the received data for an indication of the need to upgrade the implantable cardiac monitor to the implantable pacemaker.

50. (Original) The method of claim 49, wherein analyzing the received data comprises analyzing the received data to detect one or more predetermined cardiac arrhythmias.

51. (Original) A method, comprising:

generating instructions readable by an implantable pacemaker, the instructions converting the implantable pacemaker to an implantable cardiac monitor, including programming a sensing circuit for sensing a far-field electrogram; and

transmitting the instructions to the implantable pacemaker.

52. (Original) The method of claim 51, wherein programming the sensing circuit comprises programming a band-pass filter.

53. (Original) The method of claim 51, wherein generating the instructions comprises generating instructions for re-allocating additional memory spaces for data storage.

54. (Original) The method of claim 51, wherein generating the instructions comprises generating instructions for preparing and executing at least one arrhythmia detection algorithms.

55. (Original) The method of claim 54, wherein generating the instructions comprises generating instructions for creating an activity log reporting detection of arrhythmias each including a time of occurrence and a type.

56. (Original) The method of claim 51, further comprising receiving a signal indicative of whether the implantable pacemaker has been converted to the implantable cardiac monitor.